



North Dakota Monthly Climate Summary

August 2019

Volume 13, No. 8

Precipitation

North Dakota State Climate Office: Your Resource for Climate Information



North Dakota State University

College of Agriculture,
Food Systems,
and Natural Resources

304 Morrill Hall
 Fargo, ND 58108-6050

www.ndsu.edu/ndSCO

Adnan.Akyuz@ndsu.edu

701-231-6577

This publication can be made available in alternative formats upon request.

Based on the National Centers for Environmental Information (NCEI), the statewide average August precipitation was 2.93 inches, which was 0.31 inch less than last month, 1.48 inches more than in August 2018 and 0.84 inch more than the 1981-2010 average, making it the 21st wettest August in the 125-year period of record. It was the wettest August since 2014 (Table 1). The numbers less than 100 in Figure 1 below are shaded in yellow, orange and red to depict the region with below-average rainfall. In contrast, the numbers that are greater than 100 in the same figure are shaded in green, blue and purple to depict the region with above-average rainfall in August. The greatest monthly precipitation accumulation was 6.36 inches, recorded in Mayville, Traill County. The greatest 24-hour precipitation was 2.85 inches, recorded in New England, Hettinger County, on Aug. 11. The greatest monthly snowfall accumulation was a trace, recorded in Bismarck, Burleigh County. The greatest 24-hour snowfall was a trace, recorded also in Bismarck on Aug. 25. Based on historical records, statewide August precipitation showed a positive long-term trend of 0.08 inch per century since 1895. The highest and lowest August precipitation for the state ranged from 4.54 inches in 1900 to 0.73 inch in 1929 and 1933 (Figure 2).

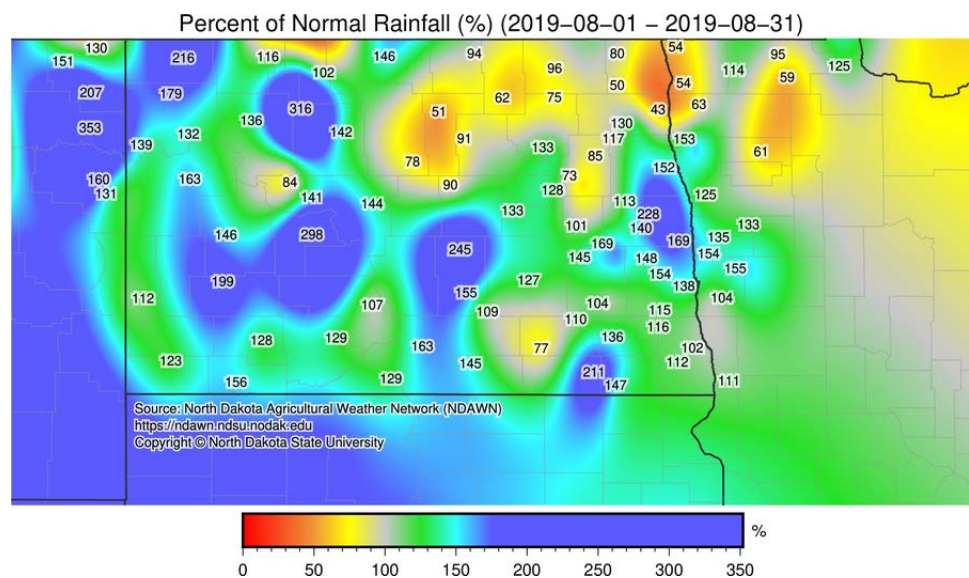


Figure 1. August 2019 precipitation percent of normal for North Dakota. (North Dakota Agricultural Weather Network)



Feel free to use and share this content, but please do so under the conditions of our [Creative Commons](#) license and our [Rules for Use](#).

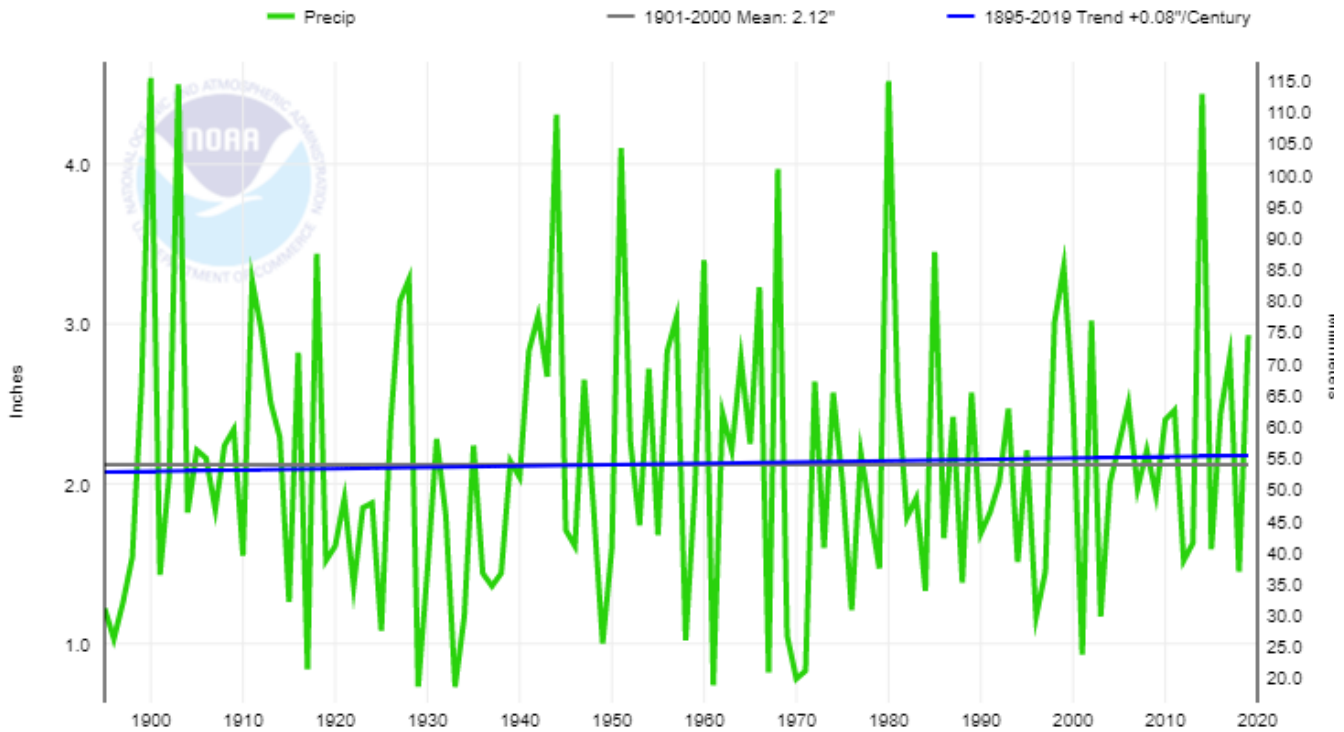


North Dakota Monthly Climate Summary

August 2019

Volume 13, No. 8

North Dakota, Precipitation, August



August Precipitation Statistics

Record high value: 4.54 inches in 1900
 Record low value: 0.73 inch in 1929, 1933
 Trend: 0.08 inch per century

August 2019 value: 2.93 inch
 1981-2010 average: 2.09 inch
 Monthly ranking: 21st wettest
 Record length: 125 years

Figure 2. Historical August precipitation time series for North Dakota. (NCEI, NOAA)

Table 1. North Dakota August Precipitation Ranking Table.

Period	Value	Normal	Anomaly	Rank	Wettest/Driest Since	Record Year
August 2019	2.93"	2.09"	+ 0.84	105th driest 21st wettest	Driest since 2018 Wettest since 2014	1929,1933 1900



Feel free to use and share this content, but please do so under the conditions of our [Creative Commons](#) license and our [Rules for Use](#).



North Dakota Monthly Climate Summary

August 2019

Volume 13, No. 8

Temperature

The official state average August temperature was 65.8 F, which is 3.6 F cooler than last month and 1.8 F cooler than in August 2018. The average August temperature was 1.8 F cooler than the 1981-2010 average, which made it the 43rd coolest August in the 125-year period of record. It was the coolest August since 2017 (Table 2). The negative numbers in Figure 3 are shaded in green and blue to depict the region with cooler-than-average temperatures in August. In contrast, the less negative numbers in the same figure are shaded in red and orange to depict the region with warmer-than-average temperatures in August. The state's highest and lowest daily temperatures ranged from 98 F on Aug. 4 in Watford City, McKenzie County, to 33 F on Aug. 28 in Hettinger, Adams County. Based on the historical records, the state average August temperature showed a slight positive long-term trend of 0.2 F per decade since 1895. The highest and lowest monthly state August average temperatures ranged from 73.8 F in 1983 to 61.2 F in 1977 (Figure 4).

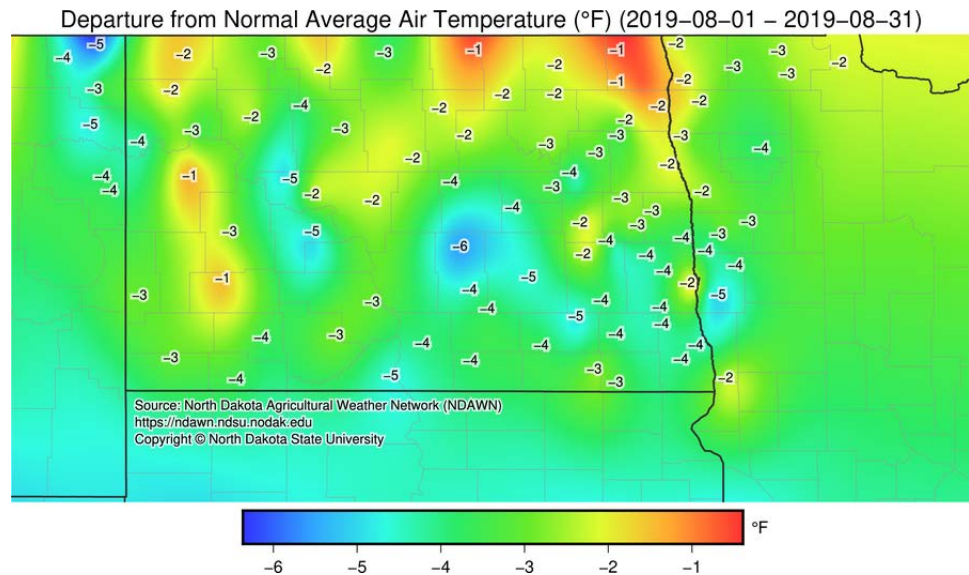


Figure 3. August 2019 temperature departure from normal for North Dakota. (North Dakota Agricultural Weather Network)



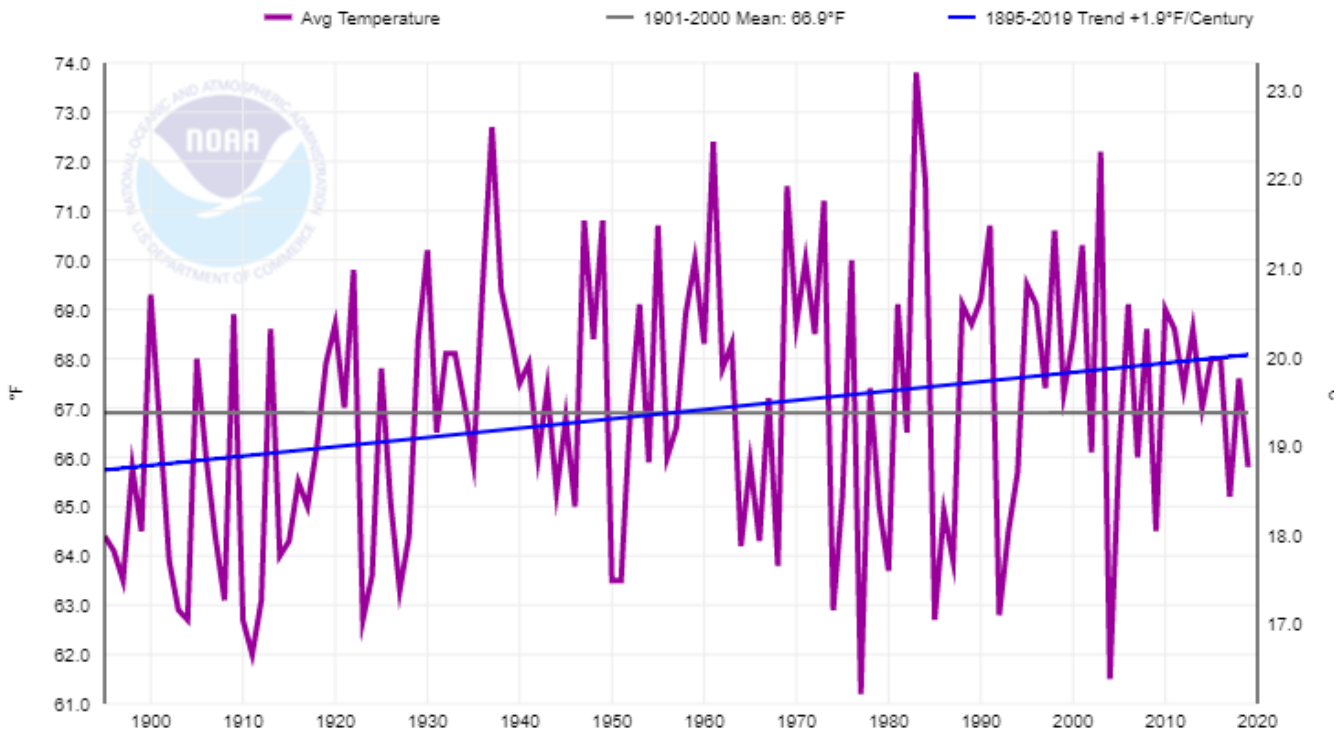


North Dakota Monthly Climate Summary

August 2019

Volume 13, No. 8

North Dakota, Average Temperature, August



August Temperature Statistics

Record high value: 73.8 F in 1983

Record low value: 61.2 F in 1977

Trend: 0.2 F per decade

August 2019 value: 65.8 F

1981-2010 average: 67.6 F

Monthly ranking: 59th warmest

Record length: 125 years

Figure 4. Historical August temperature time series for North Dakota. (National Centers for Environmental Information, NOAA)

Table 2. North Dakota August Temperature Ranking Table.

Period	Value	Normal	Anomaly	Rank	Warmest/Coollest Since	Record Year
August 2019	65.8	67.6	-1.8	43rd coolest 83rd warmest	Coollest since 2017 Warmest since 2018	1977 1983



Feel free to use and share this content, but please do so under the conditions of our [Creative Commons](#) license and our [Rules for Use](#).



North Dakota Monthly Climate Summary

August 2019

Volume 13, No. 8

Storm Reports: Table 3 below shows the summary of August Severe Storm Reports in North Dakota (Storm Prediction Center, NOAA).

The NOAA Storm Report showed 85 significant storm events in August. Table 3 summarizes the number of tornado, hail and damaging wind reports in August, while Figure 5 geographically displays the locations of these storms.

Table 3. Summary of August Severe Storm Reports in North Dakota. (Storm Prediction Center, NOAA)

Category	Number of Reports
<i>Tornado reports</i>	1
<i>Hail reports</i>	62
<i>Wind reports</i>	22
Total	85

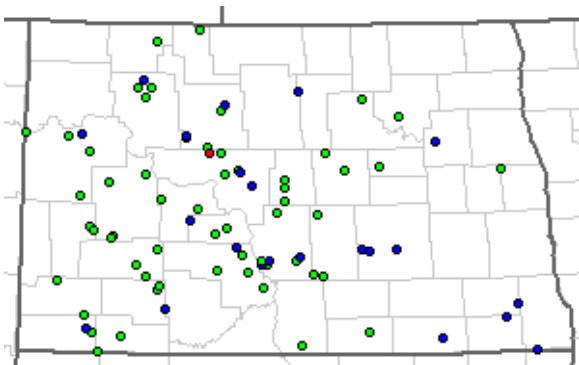


Figure 5. Map of August 2019 North Dakota storm events (red: tornado; blue: wind; green: hail). (Storm Prediction Center, NOAA)



Feel free to use and share this content, but please do so under the conditions of our [Creative Commons](#) license and our [Rules for Use](#).



North Dakota Monthly Climate Summary

August 2019

Volume 13, No. 8

Daily Record Events in August: Across the observation network of weather stations with at least 30 years of history, two daily high- and 26 daily low-temperature records were set or tied. A total of 20 highest daily precipitation-related records were set or tied. Details of the records are in Table 4.

Table 4. Summary of daily records broken or set in North Dakota in August. (NCEI Daily Weather Records)

<i>Category</i>	<i>Number of Records</i>
<i>Highest daily max. temp.</i>	0
<i>Highest daily min. temp.</i>	2
<i>Lowest daily max. temp.</i>	26
<i>Lowest daily min. temp.</i>	0
<i>Highest daily precipitation</i>	18
<i>Highest daily snowfall</i>	2
<i>Total</i>	48

The Highlight of the Month*

A highest daily snowfall record of a trace was set in **Bismarck** on **Aug. 25** (years on record: 134).

**The records in this box may be different from the record on Pages 1 and 3 because this page only includes records for stations with at least 30 years of history.*

NDSU does not discriminate in its programs and activities on the basis of age, color, gender expression/identity, genetic information, marital status, national origin, participation in lawful off-campus activity, physical or mental disability, pregnancy, public assistance status, race, religion, sex, sexual orientation, spousal relationship to current employee, or veteran status, as applicable. Direct inquiries to Vice Provost, Title IX/ADA Coordinator, Old Main 201, [\(701\) 231-7708](tel:7012317708), ndsuoaa@ndsuo.edu.

This work is supported by the USDA National Institute of Food and Agriculture, Hatch/Multi State project ND1005365.



Feel free to use and share this content, but please do so under the conditions of our [Creative Commons](#) license and our [Rules for Use](#).